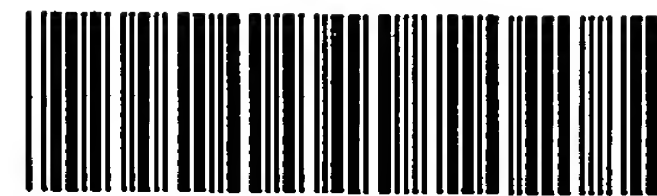


RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical
Information Center (STIC) no errors detected.

Application Serial Number: 10/615,723A
Source: 1FW/b
Date Processed by STIC: 11/17/06

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IFW16

RAW SEQUENCE LISTING

DATE: 11/17/2006

PATENT APPLICATION: US/10/615,723A

TIME: 08:54:09

Input Set : A:\64129SeqList.txt

Output Set: N:\CRF4\11172006\J615723A.raw

3 <110> APPLICANT: THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS
 4 REPRESENTED BY THE SECRETARY OF THE DEPARTMENT OF HEALTH AND
 5 HUMAN SERVICES
 6 Zoon, Kathryn C.
 7 Hu, Renqiu
 8 Bekisz, Joseph B.
 9 Hayes, Mark P.
 W--> 10 <120> TITLE OF INVENTION: Interferon Alpha Hybrids
 12 <130> FILE REFERENCE: 4239-64129-01
 14 <140> CURRENT APPLICATION NUMBER: US 10/615,723A
 15 <141> CURRENT FILING DATE: 2003-07-08
 17 <150> PRIOR APPLICATION NUMBER: US 09/744,754
 18 <151> PRIOR FILING DATE: 2001-01-24
 20 <150> PRIOR APPLICATION NUMBER: US 60/094,407
 21 <151> PRIOR FILING DATE: 1998-07-28
 23 <150> PRIOR APPLICATION NUMBER: PCT/US99/15284
 24 <151> PRIOR FILING DATE: 1999-07-06
 26 <160> NUMBER OF SEQ ID NOS: 44
 28 <170> SOFTWARE: PatentIn version 3.1
 30 <210> SEQ ID NO: 1
 31 <211> LENGTH: 27
 32 <212> TYPE: DNA
 33 <213> ORGANISM: Artificial Sequence
 35 <220> FEATURE:
 36 <223> OTHER INFORMATION: Synthetic Oligonucleotide
 38 <400> SEQUENCE: 1
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 42 <210> SEQ ID NO: 2
 43 <211> LENGTH: 27
 44 <212> TYPE: DNA
 45 <213> ORGANISM: Artificial Sequence
 47 <220> FEATURE:
 48 <223> OTHER INFORMATION: Synthetic Oligonucleotide
 50 <400> SEQUENCE: 2
 51 agcagatgag tcctttgtgc tgaagag 27
 54 <210> SEQ ID NO: 3
 55 <211> LENGTH: 27
 56 <212> TYPE: DNA
 57 <213> ORGANISM: Artificial Sequence
 59 <220> FEATURE:
 60 <223> OTHER INFORMATION: Synthetic Oligonucleotide
 62 <400> SEQUENCE: 3
 63 ctcttcagca caaaggactc atctgct 27

RAW SEQUENCE LISTING

DATE: 11/17/2006

PATENT APPLICATION: US/10/615,723A

TIME: 08:54:09

Input Set : A:\64129SeqList.txt

Output Set: N:\CRF4\11172006\J615723A.raw

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78 <210> SEQ ID NO: 5
79 <211> LENGTH: 24
80 <212> TYPE: DNA
81 <213> ORGANISM: Artificial Sequence
83 <220> FEATURE:
84 <223> OTHER INFORMATION: Synthetic Oligonucleotide
86 <400> SEQUENCE: 5
87 cacgcaggcc tcgaggctcat tcag 24
90 <210> SEQ ID NO: 6
91 <211> LENGTH: 24
92 <212> TYPE: DNA
93 <213> ORGANISM: Artificial Sequence
95 <220> FEATURE:
96 <223> OTHER INFORMATION: Synthetic Oligonucleotide
98 <400> SEQUENCE: 6
99 ctgaatgacc tcgaggcctg cgtg 24
102 <210> SEQ ID NO: 7
103 <211> LENGTH: 36
104 <212> TYPE: DNA
105 <213> ORGANISM: Artificial Sequence
107 <220> FEATURE:
108 <223> OTHER INFORMATION: Synthetic Oligonucleotide
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111 gagctcgcat gctcatcatt ccttcctcct taatct 36
114 <210> SEQ ID NO: 8
115 <211> LENGTH: 500
116 <212> TYPE: DNA
117 <213> ORGANISM: Artificial Sequence
119 <220> FEATURE:
120 <223> OTHER INFORMATION: Gene Fusion
122 <220> FEATURE:
123 <221> NAME/KEY: CDS
124 <222> LOCATION: (1)..(498)
127 <400> SEQUENCE: 8
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129 Cys Asp Leu Pro Gln Thr His Ser Leu Gly Asn Arg Arg Ala Leu Ile
130 1 5 10 15
132 ctc ctg gca caa atg gga aga atc tct cct ttc tcc tgc ctg aag gac 96
133 Leu Leu Ala Gln Met Gly Arg Ile Ser Pro Phe Ser Cys Leu Lys Asp
134 20 25 30
136 aga cat gac ttt gga ttc ccc caa gag gag ttt gat ggc aac cag ttc 144

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RAW SEQUENCE LISTING

DATE: 11/17/2006

PATENT APPLICATION: US/10/615,723A

TIME: 08:54:09

Input Set : A:\64129SeqList.txt

Output Set: N:\CRF4\11172006\J615723A.raw

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138          35          40          45
140 cag aag gct caa gcc atc tct gtc ctc cat gag atg atc cag cag acc      192
141 Gln Lys Ala Gln Ala Ile Ser Val Leu His Glu Met Ile Gln Gln Thr
142          50          55          60
144 ttc aat ctc ttc agc aca aag gac tca tct gct gct tgg gat gag acc      240
145 Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
146 65          70          75          80
148 ctc cta gac aaa ttc tac act gaa ctc tac cag cag ctg aat gac ctg      288
149 Leu Leu Asp Lys Phe Tyr Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu
150          85          90          95
152 gaa gcc tgt gtg ata cag ggg gtg ggg gtg aca gag act ccc ctg atg      336
153 Glu Ala Cys Val Ile Gln Gly Val Gly Val Thr Glu Thr Pro Leu Met
154          100          105          110
156 aag gag gac tcc att ctg gct gtg agg aaa tac ttc caa aga atc act      384
157 Lys Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
158          115          120          125
160 ctc tat ctg aaa gag aag aaa tac agc cct tgt gcc tgg gag gtt gtc      432
161 Leu Tyr Leu Lys Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
162          130          135          140
164 aga gca gaa atc atg aga tct ttt tct ttg tca aca aac ttg caa gaa      480
165 Arg Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu
166 145          150          155          160
168 agt tta aga agt aag gaa tg      500
169 Ser Leu Arg Ser Lys Glu
170          165
173 <210> SEQ ID NO: 9
174 <211> LENGTH: 166
175 <212> TYPE: PRT
176 <213> ORGANISM: Artificial Sequence
178 <220> FEATURE:
179 <223> OTHER INFORMATION: Gene Fusion
181 <400> SEQUENCE: 9
183 Cys Asp Leu Pro Gln Thr His Ser Leu Gly Asn Arg Arg Ala Leu Ile
184 1          5          10          15
187 Leu Leu Ala Gln Met Gly Arg Ile Ser Pro Phe Ser Cys Leu Lys Asp
188          20          25          30
191 Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Asp Gly Asn Gln Phe
192          35          40          45
195 Gln Lys Ala Gln Ala Ile Ser Val Leu His Glu Met Ile Gln Gln Thr
196          50          55          60
199 Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
200 65          70          75          80
203 Leu Leu Asp Lys Phe Tyr Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu
204          85          90          95
207 Glu Ala Cys Val Ile Gln Gly Val Gly Val Thr Glu Thr Pro Leu Met
208          100          105          110
211 Lys Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
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RAW SEQUENCE LISTING

DATE: 11/17/2006

PATENT APPLICATION: US/10/615,723A

TIME: 08:54:09

Input Set : A:\64129SeqList.txt

Output Set: N:\CRF4\11172006\J615723A.raw

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215 Leu Tyr Leu Lys Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
216      130                      135                      140
219 Arg Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu
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223 Ser Leu Arg Ser Lys Glu
224                      165
227 <210> SEQ ID NO: 10
228 <211> LENGTH: 500
229 <212> TYPE: DNA
230 <213> ORGANISM: Artificial Sequence
232 <220> FEATURE:
233 <223> OTHER INFORMATION: Gene Fusion
235 <220> FEATURE:
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237 <222> LOCATION: (1)..(498)
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241 tgt gat ctg cct cag acc cac agc ctg ggt aat agg agg gcc ttg ata      48
242 Cys Asp Leu Pro Gln Thr His Ser Leu Gly Asn Arg Arg Ala Leu Ile
243 1                      5                      10                      15
245 ctc ctg gca caa atg gga aga atc tct cct ttc tcc tgc ctg aag gac      96
246 Leu Leu Ala Gln Met Gly Arg Ile Ser Pro Phe Ser Cys Leu Lys Asp
247                      20                      25                      30
249 aga cat gac ttt gga ttc ccc cag gag gag ttt gat ggc aac cag ttc      144
250 Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Asp Gly Asn Gln Phe
251                      35                      40                      45
253 cag aag gct caa gcc atc tct gtc ctc cat gag atg atc cag cag acc      192
254 Gln Lys Ala Gln Ala Ile Ser Val Leu His Glu Met Ile Gln Gln Thr
255                      50                      55                      60
257 ttc aat ctc ttc agc aca aag gac tca tct gct act tgg gaa cag agc      240
258 Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Thr Trp Glu Gln Ser
259 65                      70                      75                      80
261 ctc cta gaa aaa ttt tcc act gaa ctt aac cag cag ctg aat gac ctc      288
262 Leu Leu Glu Lys Phe Ser Thr Glu Leu Asn Gln Gln Leu Asn Asp Leu
263                      85                      90                      95
265 gag gcc tgt gtg ata cag ggg gtg ggg gtg aca gag act ccc ctg atg      336
266 Glu Ala Cys Val Ile Gln Gly Val Gly Val Thr Glu Thr Pro Leu Met
267                      100                      105                      110
269 aag gag gac tcc att ctg gct gtg agg aaa tac ttc caa aga atc act      384
270 Lys Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
271                      115                      120                      125
273 ctc tat ctg aaa gag aag aaa tac agc cct tgt gcc tgg gaa gtt gtc      432
274 Leu Tyr Leu Lys Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
275                      130                      135                      140
277 aga gca gaa atc atg aga tct ttt tct ttg tca aca aac ttg caa gaa      480
278 Arg Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu
279 145                      150                      155                      160
281 agt tta aga agt aag gaa tg      500
282 Ser Leu Arg Ser Lys Glu
283                      165

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RAW SEQUENCE LISTING

DATE: 11/17/2006

PATENT APPLICATION: US/10/615,723A

TIME: 08:54:09

Input Set : A:\64129SeqList.txt

Output Set: N:\CRF4\11172006\J615723A.raw

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288 <212> TYPE: PRT
289 <213> ORGANISM: Artificial Sequence
291 <220> FEATURE:
292 <223> OTHER INFORMATION: Gene Fusion
294 <400> SEQUENCE: 11
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297 1          5          10          15
300 Leu Leu Ala Gln Met Gly Arg Ile Ser Pro Phe Ser Cys Leu Lys Asp
301          20          25          30
304 Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Asp Gly Asn Gln Phe
305          35          40          45
308 Gln Lys Ala Gln Ala Ile Ser Val Leu His Glu Met Ile Gln Gln Thr
309          50          55          60
312 Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Thr Trp Glu Gln Ser
313 65          70          75          80
316 Leu Leu Glu Lys Phe Ser Thr Glu Leu Asn Gln Gln Leu Asn Asp Leu
317          85          90          95
320 Glu Ala Cys Val Ile Gln Gly Val Gly Val Thr Glu Thr Pro Leu Met
321          100         105         110
324 Lys Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
325          115         120         125
328 Leu Tyr Leu Lys Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
329          130         135         140
332 Arg Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu
333 145         150         155         160
336 Ser Leu Arg Ser Lys Glu
337          165
340 <210> SEQ ID NO: 12
341 <211> LENGTH: 497
342 <212> TYPE: DNA
343 <213> ORGANISM: Artificial Sequence
345 <220> FEATURE:
346 <223> OTHER INFORMATION: Gene Fusion
348 <220> FEATURE:
349 <221> NAME/KEY: CDS
350 <222> LOCATION: (1)..(495)
353 <400> SEQUENCE: 12
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355 Cys Asp Leu Pro Gln Thr His Ser Leu Gly Ser Arg Arg Thr Leu Met
356 1          5          10          15
358 ctc ctg gca cag atg agg aga atc tct ctt ttc tcc tgc ttg aag gac      96
359 Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys Asp
360          20          25          30
362 aga cgt gac ttt gga ttt ccc cag gag gag ttt ggc aac cag ttc caa      144
363 Arg Arg Asp Phe Gly Phe Pro Gln Glu Glu Phe Gly Asn Gln Phe Gln
364          35          40          45
366 aag gct gaa acc atc cct gtc ctc cat gag atg atc cag cag atc ttc      192

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RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/10/615,723A

DATE: 11/17/2006
TIME: 08:54:10

Input Set : A:\64129SeqList.txt
Output Set: N:\CRF4\11172006\J615723A.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:43; Xaa Pos. 5,9

Seq#:44; Xaa Pos. 5,9

VERIFICATION SUMMARY

DATE: 11/17/2006

PATENT APPLICATION: US/10/615,723A

TIME: 08:54:10

Input Set : A:\64129SeqList.txt

Output Set: N:\CRF4\11172006\J615723A.raw

L:10 M:283 W: Missing Blank Line separator, <120> field identifier
L:1444 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:43 after pos.:0
L:1469 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:44 after pos.:0